

1 **Amendments to the Claims:**

2 The listing of claims below replaces prior versions of claims in the
3 application:

4
5 **Claims pending**

- 6 • At time of the Action: Claims 1-10,13-39 and 42-44
7 • After this Response: Claims 1-10, 13-16, 18-24, 26-32, 34, 36-39
8 and 42-44

9 **Canceled or Withdrawn claims:** 17, 25, 33, 35

10 **Amended claims:** 1, 5, 13, 19, 28, 32, 43 and 44.

11 **New claims:** None

12
13 1. (Currently amended) A television tuner comprising:
14 a tuner software module to expose functionality of the tuner software
15 module to an application program via an application programming interface and to
16 find a particular frequency using:

17 a country table listing a plurality of countries; and
18 multiple channel-to-frequency mapping tables correlating channel
19 numbers to corresponding frequencies for associated countries in the
20 country table, the channel-to-frequency mapping tables being indexed by
21 the country table so that selection of a country in the country table
22 references an associated channel-to-frequency mapping table for the
23 selected country; and
24
25

1 a tuning device to tune to a the found particular frequency within the
2 channel-to-frequency mapping table associated with the selected country upon
3 selection of a corresponding channel.

4
5 2. (Original) A television tuner as recited in claim 1, wherein the
6 country table lists the countries according to a uniquely assigned country code.

7
8 3. (Original) A television tuner as recited in claim 1, wherein the
9 country table lists the countries according to an International Telecommunications
10 Union (ITU) code.

11
12 4. (Original) A television tuner as recited in claim 1, wherein the
13 channel-to-frequency mapping tables also contain a television standard for the
14 associated countries.

15
16 5. (Currently amended) A television tuning component for a
17 television tuning system, comprising a tuner software module to expose
18 functionality of the tuner software module to an application program via an
19 application programming interface and to adjust the television tuning system
20 using:

21 a country table listing a plurality of countries; and

22 multiple channel-to-frequency mapping tables correlating channel
23 numbers to corresponding frequencies for associated countries in the
24 country table, the channel-to-frequency mapping tables being indexed by
25 the country table so that selection of a country in the country table

1 references an associated channel-to-frequency mapping table for the
2 selected country and selection of a channel in the channel-to-frequency
3 mapping table maps to a corresponding frequency.
4

5 6. (Original) A television tuning component as recited in claim 5,
6 wherein the country table lists the countries according to a uniquely assigned
7 country code.
8

9 7. (Original) A television tuning component as recited in claim 5,
10 wherein the country table lists the countries according to an International
11 Telecommunications Union (ITU) code.
12

13 8. (Original) A television tuning component as recited in claim 5,
14 wherein the channel-to-frequency mapping tables also contain a television
15 standard for the associated countries.
16

17 9. (Original) A television tuning component as recited in claim 5,
18 embodied in software as a dynamic linked library stored on a computer-readable
19 storage medium.
20

21 10. (Original) A television tuner incorporating the television tuning
22 component as recited in claim 5.
23

24 11-12. (cancelled).
25

1 13. (Currently amended) A television tuning system comprising:
2 tuner circuitry to tune to various television frequencies carrying television
3 video signals;
4 video decoder circuitry coupled to receive a television video signal from the
5 tuner circuitry and to convert the television video signal to digital video data;
6 a tuner module coupled to adjust the tuner circuitry to a particular television
7 frequency, wherein the tuner module supports an application programming
8 interface to expose functionality of the tuner module to an application program;
9 a video decoder module to decode the digital video data according to a
10 particular video standard;
11 wherein the tuner module has a country table listing a plurality of countries
12 and multiple channel-to-frequency mapping tables that provide video standards
13 and correlate channel numbers to corresponding frequencies for associated
14 countries in the country table, the channel-to-frequency mapping tables being
15 indexed by the country table so that selection of a country in the country table
16 references an associated channel-to-frequency mapping table for the selected
17 country; and
18 wherein the tuner module selects a channel-to-frequency mapping table
19 based upon input of a particular country and outputs a video standard to the video
20 decoder for use in decoding the digital video data, the tuner module further
21 selecting a television frequency from the selected channel-to-frequency mapping
22 table based upon input of a corresponding channel and outputting the selected
23 television frequency to the tuner circuitry to cause the tuner circuitry to tune to the
24 selected television frequency.
25

1 14. (Original) A television tuning system as recited in claim 13,
2 wherein the country table lists the countries according to an International
3 Telecommunications Union (ITU) code.

4
5 15. (Original) A television tuning system as recited in claim 13,
6 wherein the tuner module is embodied as a dynamic linked library.

7
8 16. (Original) A television tuning system as recited in claim 13,
9 further comprising a second tuner module different from the tuner module, the
10 second tuner module being used to replace the tuner module during upgrade
11 without replacing the tuning circuitry and the decoding circuitry.

12
13 17. (cancelled).

14
15 18. (Original) A television tuning system as recited in claim 13,
16 wherein the tuner module stores a set of television frequencies that map to
17 corresponding channels within the particular country for subsequent retrieval.

18
19 19. (Currently amended) A television tuning manager for a television
20 tuner, the television tuning manager being implemented in software stored on a
21 computer-readable storage medium, the television tuning device comprising:
22 a country table listing a plurality of countries;
23 multiple channel-to-frequency mapping tables correlating channel numbers
24 to corresponding frequencies for associated countries in the country table, the
25 channel-to-frequency mapping tables being indexed by the country table so that

1 selection of a country in the country table references an associated channel-to-
2 frequency mapping table for the selected country;

3 a code segment to select a channel-to-frequency mapping table based upon
4 input of a particular country; and

5 a code segment to output a broadcast frequency from the selected channel-
6 to-frequency mapping table based upon input of a corresponding channel; and

7 an application programming interface configured to expose functionality of
8 the television tuning manager to an application.

9
10 20. (Original) A television tuning manager as recited in claim 19,
11 wherein the country table lists the countries according to a uniquely assigned
12 country code.

13
14 21. (Original) A television tuning manager as recited in claim 19,
15 wherein the country table lists the countries according to an International
16 Telecommunications Union (ITU) code.

17
18 22. (Original) A television tuning manager as recited in claim 19,
19 wherein the channel-to-frequency mapping tables also contain a television
20 standard for the associated countries.

21
22 23. (Original) A television tuning manager as recited in claim 19,
23 further comprising a code segment to store a set of broadcast frequencies that map
24 to corresponding channels within the particular country for subsequent retrieval.
25

1 24. (Original) A television tuning manager as recited in claim 19,
2 embodied as a software dynamic linked library stored on a computer-readable
3 storage medium.

4
5 25. (cancelled).

6
7 26. (Original) An application program interface for a television
8 tuning system, the application program interface being embodied on a computer-
9 readable medium and having methods for performing the following functions:

10 setting a current TV channel;
11 retrieving the current TV channel;
12 setting a country code;
13 retrieving the country code;
14 setting a storage index for regional channel to frequency mappings; and
15 retrieving the storage index.

16
17 27. (Original) An application program interface for a television
18 tuning system, the application program interface being embodied on a computer-
19 readable medium and having methods for performing the following functions:

20 retrieving all analog video TV standards supported by the tuning system;
21 retrieving a current analog video TV standard in use;
22 setting a current TV channel;
23 retrieving the current TV channel;
24 retrieving highest and lowest channels available;
25 scanning for a precise signal on the current TV channel's frequency;

1 setting a country code;
2 retrieving the country code;
3 setting a storage index for regional channel to frequency mappings;
4 retrieving the storage index;
5 retrieving a number of TV sources plugged into the tuning system;
6 setting a type of tuning system;
7 retrieving the type of tuning system;
8 retrieving a current video frequency; and
9 retrieving a current audio frequency.

10
11 28. (currently amended) A method comprising executing a software
12 module configured to the following steps:
13 expose functionality of the software module to an application via an
14 application programming interface;
15 receive ~~receiving~~ an ITU (International Telecommunications Union) code
16 for a particular country; and
17 select ~~selecting~~, based on the ITU code, a set of TV channel-to-TV
18 frequency mappings for use in the particular country.

19
20 29. (Original) A method as recited in claim 28, further comprising
21 the step of selecting, based on the ITU code, a TV standard for use in the
22 particular country.

23
24 30. (Original) A method as recited in claim 28, further comprising
25 the step of storing the selected set of TV channel-to-TV frequency mappings.

1
2 31. (Original) A computer-readable medium having computer-
3 executable instructions for performing the steps in the method as recited in claim
4 28.

5
6 32. (Currently amended) A method comprising ~~the following steps~~:
7 receiving a reference to a country;
8 selecting, based on the country reference, a set of channel-to-frequency
9 mappings correlating channels to corresponding TV frequencies in the country and
10 a television standard;
11 receiving a channel; ~~and~~
12 selecting, based on the channel, a TV frequency that maps to the channel
13 sending the frequency to the tuner circuitry;
14 tuning to the frequency to receive a television signal carried by the channel;
15 converting the television signal to digital video data; and
16 decoding the digital video data at the video decoder software module using
17 the television standard received in the tuning packet.

18
19 33. (cancelled).

20
21 34. (Original) A method as recited in claim 32, wherein the country
22 reference is an ITU (International Telecommunications Union) code.

23
24 35. (cancelled).

1 36. (Original) A method as recited in claim 32, further comprising
2 the step of scanning for a better quality frequency within the channel.

3
4 37. (Original) A method as recited in claim 32, wherein the step of
5 selecting a set of channel-to-frequency mappings comprises the following steps:
6 looking up the country in a country table that lists multiple countries; and
7 indexing from an entry for the country in the country table to a particular
8 channel-to-frequency table, the particular channel-to-frequency table containing
9 mappings of channel numbers to TV frequencies for the country.

10
11 38. (Original) A method as recited in claim 37, wherein the step of
12 selecting a TV frequency comprises the step of looking up in the particular
13 channel-to-frequency table a TV frequency that corresponds to the channel.

14
15 39. (Previously Presented) A computer-readable medium having
16 computer-executable instructions for performing the steps in the method as recited
17 in claim 32.

18
19 40-42. (cancelled).

20
21 43. (Previously Presented) A tuning system comprising:
22 a tuner software module configured to expose functionality of the tuner
23 software module to an application program via an application programming
24 interface and to find a particular frequency using:
25 a country table listing a plurality of countries; and,

multiple channel-to-frequency mapping tables correlating channel numbers to corresponding frequencies for associated countries in the country table, the channel-to-frequency mapping tables being indexed by the country table so that selection of a country in the country table references an associated channel-to-frequency mapping table for the selected country, and wherein said tuner software module ~~tuning system~~ adjusts to a particular video standard based on a selected channel from one of the multiple channel-to-frequency mapping tables.

44. (Currently amended) One or more computer-readable media having computer readable instructions thereon which, when executed by a computer, cause the computer to:

expose functionality of the computer readable instructions to an application program via an application programming interface;

receive data regarding a selected country;

map to channels available for the selected country;

receive data regarding a selected channel;

map to an appropriate video standard based on at least one of the selected country and selected channel; and,

format a tuning component to the appropriate video standard.